

CLAIMS

1. A method of producing a polyurethane foam sheet, comprising the steps of applying a liquid mixture, obtained by mixing together a heated and melted hot melt urethane prepolymer (A) containing isocyanate groups at molecular terminals, and a compound (B) containing at least 2 active hydrogen atom-containing groups, onto a substrate in a sheet-like manner, and water foaming said liquid mixture by bringing said sheet-like liquid mixture into contact with water vapor.
- 10 2. A method of producing a polyurethane foam sheet, comprising the steps of introducing a liquid mixture, obtained by mixing together a heated and melted hot melt urethane prepolymer (A) containing isocyanate groups at molecular terminals, and a compound (B) containing at least 2 active hydrogen atom-containing groups, into a space between a first releasable substrate and a second releasable substrate to form a sheet-like product in a continuous manner, and water foaming said sheet-like product sandwiched between said first releasable substrate and said second releasable substrate by bringing either one surface or both surfaces of said releasable substrates into contact with water vapor.
- 20 3. A method of producing a polyurethane foam sheet, comprising the steps of introducing a liquid mixture, obtained by mixing together a heated and melted hot melt urethane prepolymer (A) containing isocyanate groups at molecular terminals, and a compound (B) containing at least 2 active hydrogen atom-containing groups, into a space between a first releasable substrate and a second releasable substrate to form a sheet-like product in a continuous manner, removing one of said first releasable substrate and said

second releasable substrate, and water foaming said sheet-like product by bringing said sheet-like product into direct contact with water vapor.

4. A method of producing a polyurethane foam sheet according to any one of claim 1 through claim 3, wherein said liquid mixture is produced by mixing together said

heated and melted hot melt urethane prepolymer (A), said compound (B), and a urethanization catalyst (C).

5. A method of producing a polyurethane foam sheet according to any one of claim

10 1 through claim 3, wherein said hot melt urethane prepolymer (A) is a hot melt urethane prepolymer (a-2) that also contains hydrolysable alkoxy silyl groups.

6. A method of producing a polyurethane foam sheet according to any one of claim

1 through claim 3, wherein an isocyanate group content within said hot melt urethane

15 prepolymer (A) is within a range from 0.5 to 10.0% by weight.

7. A method of producing a polyurethane foam sheet according to any one of claim

1 through claim 3, wherein said hot melt urethane prepolymer (A) has a melt viscosity,

measured at 125°C using a cone-plate viscometer, within a range from 100 to 100,000

20 mPa·s.

8. A method of producing a polyurethane foam sheet according to any one of claim

1 through claim 3, wherein a ratio of a weight equivalence of active hydrogen atom-

containing groups within said compound (B) containing at least 2 active hydrogen atom-

25 containing groups, relative to a weight equivalence of isocyanate groups within said hot

melt urethane prepolymer (A) [isocyanate group equivalence / active hydrogen atom-containing group equivalence], is within a range from 1.5 to 20.0.

9. A method of producing a laminated sheet, comprising the steps of applying a
5 liquid mixture, obtained by mixing together a heated and melted hot melt urethane
prepolymer (A) containing isocyanate groups at molecular terminals, and a compound
(B) containing at least 2 active hydrogen atom-containing groups, onto a substrate in a
sheet-like manner, water foaming said liquid mixture by bringing said sheet-like liquid
mixture into contact with water vapor to form a polyurethane foam sheet, and bonding a
10 third substrate onto said polyurethane foam sheet.

10. A method of producing a laminated sheet, comprising the steps of applying a
liquid mixture, obtained by mixing together a heated and melted hot melt urethane
prepolymer (A) containing isocyanate groups at molecular terminals, and a compound
15 (B) containing at least 2 active hydrogen atom-containing groups, onto a substrate in a
sheet-like manner, bonding a third substrate onto said sheet-like liquid mixture to form a
laminate, and water foaming said liquid mixture by bringing said laminate into contact
with water vapor.

20 11. A method of producing a laminated sheet, comprising the steps of introducing a
liquid mixture, obtained by mixing together a heated and melted hot melt urethane
prepolymer (A) containing isocyanate groups at molecular terminals, and a compound
(B) containing at least 2 active hydrogen atom-containing groups, into a space between a
first releasable substrate and a second releasable substrate to form a sheet-like product in
25 a continuous manner, removing one of said first releasable substrate and said second

releasable substrate, water foaming said sheet-like product by bringing an exposed surface of said sheet-like product, and/or a remaining first or second releasable substrate, into contact with water vapor to form a polyurethane foam sheet, and bonding a third substrate to said exposed surface of said polyurethane foam sheet from which said first or 5 second releasable substrate has been removed.

12. A method of producing a laminated sheet according to any one of claim 9 through claim 11, wherein said liquid mixture is produced by mixing together said heated and melted hot melt urethane prepolymer (A), said compound (B), and a urethanization 10 catalyst (C).

13. A method of producing a laminated sheet according to any one of claim 9 through claim 11, wherein said hot melt urethane prepolymer (A) is a hot melt urethane prepolymer (a-2) that also contains hydrolysable alkoxysilyl groups.

15 14. A method of producing a laminated sheet according to any one of claim 9 through claim 11, wherein an isocyanate group content within said hot melt urethane prepolymer (A) is within a range from 0.5 to 10.0% by weight.

20 15. A method of producing a laminated sheet according to any one of claim 9 through claim 11, wherein a ratio of a weight equivalence of active hydrogen atom-containing groups within said compound (B) containing at least 2 active hydrogen atom-containing groups, relative to a weight equivalence of isocyanate groups within said urethane prepolymer (A) [isocyanate group equivalence / active hydrogen atom-containing group 25 equivalence], is within a range from 1.5 to 20.0.